

REMARKS

By the present amendment, claims 12, 14, 15, 17 and 18 are pending in the application. Claims 12 and 17 are the only independent claims.

SUPPORT FOR CLAIMS

Claim 12

Amended independent claim 12 is supported in the specification, e.g., at page 6, lines 25 to 34 and Fig. 2 of the drawings.

Claim 17

New independent claim 17 is a combination of prior claims 12 and 13.

Claim 18

New dependent claim 18 corresponds to prior dependent claim 16.

§112, ¶1

Claims 12 to 16 were rejected under 35 U.S.C. §112, first paragraph, as lacking a written description in the application as originally filed.

This rejection, as applied to the amended and new claims, is respectfully traversed.

Amended independent claim 12 is directed to “tabular ribs” and “10 mm downward”. See specification page 6, lines 25 to 34 and Figs. 2(a) to 2(c) of the drawings.

It is respectfully requested that the rejection of amended independent claim 12 under 35 U.S.C. §112, first paragraph, be withdrawn.

With respect to new independent claim 17, there is claimed a combination of “inverted-U or an inverted-V shaped ribs”; “10 mm downward”; and “central angle in the range of about 30 to 60 degrees”.

The central angle for the inverted-U or inverted-V shaped ribs is disclosed as generally in the range from 30 to 60 degrees in the specification e.g., at page 8, line 32 to page 9, line 8.

It is submitted that one skilled in the art would readily combine the teachings at page 6, lines 25 to 34 of the specification (10mm downward) with the teachings at page 8, line 32 to page 9, line 8 (central angle of about 30 to 60 degrees).

The disclosure of the specification is directed to one skilled in the art and the disclosure of the specification is understood as it is understood by one skilled in the art. One skilled in the art would readily combine the two teachings.

There is no showing or no reason advanced why one skilled in the art would require verbatim instructions in the specification to combine the disclosure and teachings of “10 mm downward” and “central angle of about 30 to 60 degrees”.

It is therefore respectfully requested that the rejection under 35 U.S.C. §112, first paragraph, as applied to amended independent claim 12 and new independent claim 17, and all claims dependent thereon, be withdrawn.

§103

Claims 12 to 16 were rejected under 35 U.S.C. §103(a) as being unpatentable over PCT publication WO/01/16438 (Sugimoto) in view of either U.S. Patent No. 6,467,321 to Prokopenko et al. or the 1 page abstract of the published article “Investigation On Improving Fatigue Properties Of Welded Joints By Ultrasonic Peening Method” referred to in the Office Action as “Lixing”.

WO/01/16438 corresponds to U.S. Patent No. 857,808 to Sugimoto et al.

These rejections, as applied to the amended and new claims of the present amendment, are respectfully traversed.

The Present Invention

The present invention provides a steel pipe pole base reinforced with tabular ribs welded to the steel pipe pole base in the form of a T-joint, characterized by having ultrasonic peening processed portions at weld toes, wherein the peened processed portions for the ribs is a portion located from an upper end portion of the ribs to at least 10 mm downward from the upper end portion, and in case of inverted-U or inverted-V shaped ribs, have a center line and the peened processed portion for the shaped ribs is a region extending at a central angle on both sides of the center line, wherein the central angle is in the range of about 30 to 60 degrees.

Patentability

The technical feature of Prokopenko and Lixing is to apply peening for increasing fatigue strength at the welded joint which has a low stress concentration. Neither of these references disclose or suggest the characteristic feature of the present invention that ultrasonic peening is applied only to a portion located from an upper end portion of the ribs to at least 10 mm downward from the upper end portion and with the central angle in the range of about 30 to 60 degrees. If ultrasonic peening is applied to the whole portion of the welded joint, it is very costly and time consuming.

Further, Figs. 5 and 6 of the specification of the present invention show the results of stress concentration analysis at the steel pipe pole base. From these figures, it is clearly understood that fatigue damage is generated at the high stress concentrated portions of

the steel pipe pole base. Therefore, the present invention defines that the ultrasonic peened processed portions for the ribs is a portion located from an upper end portion of the tabular ribs or the inverted-U or inverted-V shaped ribs to at least 10 mm downward from the upper end portion and wherein the inverted-U or inverted-V shaped ribs have a center line and the peened processed portion for the shaped ribs is a region extending at a central angle on both sides of the center line, wherein the central angle is in the range of about 30 to 60 degrees, for increasing the fatigue life of the welded joint with the minimum cost and time, as shown in Figs. 7 and 8.

These significant effects are not disclosed or suggested in the cited references. As a result, the cited references (Sugimoto, Prokopenko and Lixing) do not disclose or suggest the above characteristic features of the present invention. Therefore, the present invention is quite different from the cited references.

It is therefore submitted that amended independent claim 12, new independent claim 17, and all claims dependent thereon, are patentable over Sugimoto in view of Prokopenko and/or Lixing.

CONCLUSION

It is submitted that in view of the present amendment and foregoing remarks, the application is now in condition for allowance. It is therefore respectfully requested that the application, as amended, be allowed and passed for issue.

Respectfully submitted,

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